

least four times the sum of the pressure of the relief valve setting (or four times the maximum pump pressure when no relief valve is installed) plus the static head pressure of the transfer system, at the point where the hose is installed.

(b) The maximum allowable working pressure (MAWP) for each hose assembly must be more than the sum of the pressure of the relief valve setting (or the maximum pump pressure when no relief valve is installed) plus the static head pressure of the transfer system, at the point where the hose is installed.

(c) Each nonmetallic hose must be usable for oil or hazardous material service.

(d) Each hose assembly must either have:

- (1) Full threaded connections;
- (2) Flanges that meet standard B16.5, *Steel Pipe Flanges and Flang Fittings*, or standard B.16.24, *Brass or Bronze Pipe Flanges*, of the American National Standards Institute (ANSI); or
- (3) Quick-disconnect couplings that meet ASTM F 1122 (incorporated by reference, see § 154.106).

(e) Each hose must be marked with one of the following:

- (1) The name of each product for which the hose may be used; or
- (2) For oil products, the words "OIL SERVICE"; or
- (3) For hazardous materials, the words "HAZMAT SERVICE—SEE LIST" followed immediately by a letter, number or other symbol that corresponds to a list or chart contained in the facility's operations manual or the vessel's transfer procedure documents which identifies the products that may be transferred through a hose bearing that symbol.

(f) Each hose also must be marked with the following, except that the information required by paragraphs (f)(2) and (3) of this section need not be marked on the hose if it is recorded in the hose records of the vessel or facility, and the hose is marked to identify it with that information:

- (1) Maximum allowable working pressure;
- (2) Date of manufacture; and
- (3) Date of the latest test required by § 156.170.

(g) The hose burst pressure and the pressure used for the test required by § 156.170 of this chapter must not be marked on the hose and must be recorded elsewhere at the facility as described in paragraph (f) of this section.

(h) Each hose used to transfer fuel to a vessel that has a fill pipe for which containment can not practically be provided must be equipped with an automatic back pressure shutoff nozzle.

[CGD 75-124, 45 FR 7172, Jan. 31, 1980, as amended by CGD 86-034, 55 FR 36253, Sept. 4, 1990; CGD 88-032, 56 FR 35820, July 29, 1991; CGD 92-027, 58 FR 39662, July 26, 1993; CGD 93-056, 61 FR 41459, Aug. 8, 1996; USCG-2000-7223, 65 FR 40057, June 29, 2000]

§ 154.510 Loading arms.

(a) Each mechanical loading arm used for transferring oil or hazardous material and placed into service after June 30, 1973, must meet the design, fabrication, material, inspection, and testing requirements in ANSI B31.3.

(b) The manufacturer's certification that the standard in paragraph (a) of this section has been met must be permanently marked on the loading arm or recorded elsewhere at the facility with the loading arm marked to identify it with that information.

(c) Each mechanical loading arm used for transferring oil or hazardous material must have a means of being drained or closed before being disconnected after transfer operations are completed.

[CGD 75-124, 45 FR 7172, Jan. 31, 1980, as amended by CGD 86-034, 55 FR 36253, Sept. 4, 1990]

§ 154.520 Closure devices.

(a) Except as provided in paragraph (b) of this section, each facility to which this part applies must have enough butterfly valves, wafer-type resilient seated valves, blank flanges, or other means acceptable to the COTP to blank off the ends of each hose or loading arm that is not connected for the transfer of oil or hazardous material. Such hoses and/or loading arms must be blanked off during the transfer of oil or hazardous material. A suitable material in the joints and couplings shall